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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,878	05/30/2001	Vance M. Stephens	10003568-1	8982

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER
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LETT, THOMAS J

ART UNIT	PAPER NUMBER
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2625

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/870,878	<b>Applicant(s)</b> STEPHENS, VANCE M.	
	<b>Examiner</b> THOMAS J. LETT	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-14 and 16-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-14 and 16-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 25 March 2008 have been fully considered but they are not persuasive.

Applicant amends the claims using additional support in the disclosure to overcome the cited references of Ohsumi, Kato and Storlie et al. In particular, Applicant has added the features of "scanning a carriage containing one or more inkjet print heads and a sensor over the print medium while detecting at least one edge of the print medium;" and "calculating print medium and placement characteristics based upon the detecting the at least one edge of the print medium to determine calculated print medium and placement characteristics for the print medium".

Examiner agrees that the sensor design of the cited references do not include a sensor in combination with the ink cartridge(s) on a scanning carriage. Examiner has found this feature in the prior art of Khormaei (USP 5,397,192). Khormaei teaches scanning a carriage containing one or more inkjet print heads (see carriage 22, printhead 40 and optical sensor 50 of figure 1 and col. 3, lines 33-38) and a sensor (sensor 50) over the print medium (media 80) while detecting at least one edge (side edges 84 and 86, col. 6, lines 45-53) of the print medium (also see col. 6, line 62 – col. 7, line 23 wherein the print data may be shifted to compensate for skew).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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2. Claims 1,4,6,9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Khormaee (USP 5,397,192).

Regarding claim 1, Khormaee discloses a method for printing an image on a print medium, comprising:

positioning the print medium within a print zone (media 80, media 14 is positioned on platen 12, see figures 3 and 4);

scanning a carriage containing one or more inkjet print heads and a sensor (carriage 22, printhead 40 and optical sensor 50 of figure 1 and col. 3, lines 33-38) over the print medium while detecting at least one edge of the print medium;

calculating print medium and placement characteristics based upon the detecting the at least one edge (side edges 84 and 86, col. 6, lines 45-53; (side edges 84 and 86 and col. 7, lines 1-5) of the print medium to determine calculated print medium and placement characteristics (determination of position signals to correlate to media position, col. 7, lines 1-7) for the print medium;

utilizing the calculated print medium size and placement characteristics (position profile, col. 7, lines 9-12) to shift an image to be printed (if the media is off course then control subsystem 60 will shift the print data, col. 7, lines 22-23); and

printing the image on the medium (shift the printing, col. 7, lines 22-23).

With respect to claim 4, Khormaee discloses the method of claim 1, wherein said actual medium size and/or placement characteristics include a skew characteristic a leading edge of the medium (media skew is determined at col. 7, lines 1-20).

With respect to claim 6, Khormaee discloses the method of claim 1, wherein said actual medium size and/or placement characteristics include a medium width characteristic (media profile inherently includes the size (i.e., width, length) at col. 7, lines 5-12).

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With respect to claim 9, Khormaee discloses the method of claim 1, wherein said image includes shifting the position of the print medium along a media feed path (shift the printing, col. 7, lines 22-23).

3. Claims 2,3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khormaee (USP 5,397,192) in view of Ohsumi et al (US 6,052,552).

With respect to claim 2, Khormaee does not disclose expressly that the image extends from lateral edge to lateral edge of the medium.

Ohsumi et al disclose that margins are determined by timing of image forming by the laser on the photoconductor. Such timing can be conceivably adjusted to leave margin of zero or no margin (col. 4, lines 59-67).

Khormaee and Ohsumi et al are analogous art because they are from the similar problem solving area of print data compensation. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the borderless feature of Ohsumi et al to Khormaee in order to obtain an image extending from one edge to the opposite edge. The motivation for doing so would be to extend the image from edge to edge of the medium.

With respect to claim 3, Ohsumi in view of Kato disclose the method of claim 1, wherein said actual medium size and/or placement characteristics include an absolute location of a point on a leading edge of the medium (an accurate position location, col. 3, lines 32-35).

Khormaee and Ohsumi et al are analogous art because they are from the similar problem solving area of print data compensation. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the reference position feature of Ohsumi et al to Khormaee in order to obtain an absolute location of a point. The motivation for doing so would be to create a reference point.

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With respect to claim 10, Khormae in view of Ohsumi disclose the method of claim 1, wherein an area of the image smaller than an area medium, so that margins are provided on the medium after said printing (see claim 2 argument).

4. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khormae (USP 5,397,192) in view of Mizubata et al (USP 6,888,650).

With respect to claim 7, Khormae disclose the method of claim 1.

Khormae does not disclose: wherein said shifting said image includes digitally shifting the image in a direction aligned with or transverse to a medium advance axis.

Mizubata discloses this limitation in column 7, lines 36-42.

Khormae and Mizubata are analogous art, because they are from the same field of endeavor, namely printing devices.

At the time of the invention, it would have been obvious for one skilled in the art to combine Khormae's method of claim 1, with Mizubata's method of shifting an image, including digitally shifting the image in a direction aligned with or transverse to a medium advance axis.

The suggestion or motivation for doing so would have been to correct for misalignment of the image.

With respect to claim 8, Khormae disclose the method of claim 1.

Khormae does not disclose: wherein said shifting said image includes digitally rotating the image

Mizubata discloses this theta rotation limitation in column 7, lines 36-42.

At the time of the invention, it would have been obvious for one skilled in the art to combine Khormae's method of claim 1, with Mizubata's method of shifting an image, including digitally shifting the image in a direction aligned with or transverse to a medium advance axis.

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The suggestion or motivation for doing so would have been to correct for misalignment of the image.

5. Claims 11-14, 16, 19 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsumi et al (Ohsumi, US 6,052,552) in view of Kato (US 6,799,761) in view of Wibbels et al (Wibbels, US 6,118,950) and further view of Khormaee (USP 5,397,192).

utilizing the placement shift parameters to shift the back side image to align with the front side image placement;

printing a shifted back side image.

With respect to claim 11, Ohsumi in view of Kato disclose a method for duplex printing an image on a print medium, comprising:

positioning a front side of the print medium at a print zone (col 3, lines 33-35);

passing the print medium through a duplexing path to flip the print medium and present the back side of the print medium at the print zone for printing a back side image;

measuring leading edge and absolute location characteristics of the flipped print medium (col 3, lines 33-35, after paper is turned over similar position detection is employed); although Ohsumi discloses in column 5, lines 1-15, the importance of aligning front and back images, he does not explain the method of alignment that is by calculating shift parameters to shift the back side image to align with the front side image placement and print a shifted back side image.

Wibbels discloses these limitations in column 5, lines 12-30 by shifting the front and back images for alignment of images.

Ohsumi, Kato and Wibbels are analogous art, because they are from the same field of endeavor, namely printing compensation.

At the time of the invention, it would have been obvious for one skilled in the art to combine Ohsumi in view of Kato's method for duplex printing, with Wibbels's method of

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alignment which calculates shift parameters to shift the back side image to align with the front side image placement and print a shifted back side image.

The suggestion or motivation for doing so would have been to avoid subsequent cutting of copy sheet causing cutting away the images (Ohsumi- col 5, lines 9-15).

Ohsumi, Kato and Wibbels do not expressly disclose scanning a carriage containing one or more inkjet print heads and a sensor over the print medium while detecting at least one edge of the print medium; and calculating print medium and placement shift parameters based upon the detecting the at least one edge of the print medium to determine calculated print medium and placement characteristics for the print medium.

Khormaei teaches scanning a carriage containing one or more inkjet print heads and a sensor (carriage 22, printhead 40 and optical sensor 50 of figure 1 and col. 3, lines 33-38) over the print medium while detecting at least one edge of the print medium and

calculating print medium and placement characteristics based upon the detecting the at least one edge (side edges 84 and 86, col. 6, lines 45-53; (side edges 84 and 86 and col. 7, lines 1-5) of the print medium to determine calculated print medium and placement characteristics (determination of position signals to correlate to media position, col. 7, lines 1-7) for the print medium.

Ohsumi, Kato, Wibbels and Khormaei are analogous art, because they are from the same field of endeavor, namely printing compensation.

At the time of the invention, it would have been obvious for one skilled in the art to combine Ohsumi in view of Kato's method for duplex printing, with Wibbels's method of alignment which calculates shift parameters to shift the back side image to align with the front side image placement and print a shifted back side image with Khormaei's method of scanning a sensed cartridge and calculation feature.



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The suggestion or motivation for doing so would have been to detect and calculate position information while scanning print media.

With respect to claims 12-14, the features disclosed are analogous to those presented for claim 2-4. Therefore the examiner's explanations given above for claims 2-4 also hold for claims 12-14.

With respect to claims 16, 19 and 20, the features disclosed are analogous to those presented for claim 6, 9 and 10. Therefore the examiner's explanations given above for claims 6, 9 and 10 also hold for claims 16, 19 and 20.

With respect to claim 21, Ohsumi et al. in view of Kato in further view Wibbels et al disclose the method of claim 11, wherein said determining actual size and placement characteristics of the medium is performed without printing on said print medium (Kato: col 5, lines 61-67 and col 6, lines 1-12). The examiner interprets the determination of the medium size to pertain to the actual medium length of the sheet along the media feed path (seen in Fig 2 of Kato and disclosed in parent claim 11). The examiner notes this size is determined by input from the operation unit, which does not include printing on the print medium. Also, the placement characteristics are likewise derived from means other than printing on the print medium (Kato: col 5, lines 61-67 and col. 6, lines 1-12).

6. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsumi et al (Ohsumi, US 6,052,552) in view of Kato (US 6,799,761) in view Wibbels et al (Wibbels, US 6,118,950) in view of Khormaei (USP 5,397,192) in further view of Mizubata et al (US 6,888,650).

With respect to claim 17, Ohsumi in view of Kato in further view of Wibbels disclose the method of claim 11.

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Ohsumi, Kato, Wibbels and Khormae do not expressly disclose wherein the shifting of the image includes digitally shifting the image in a direction aligned with or transverse to a medium advance axis.

Mizubata discloses this theta shift limitation in column 7, lines 36-42.

Ohsumi, Kato, Wibbels, Khormae and Mazubata are analogous art, because they are from the same field of endeavor, namely Image Forming Apparatuses.

At the time of the invention, it would have been obvious for one skilled in the art to combine Ohsumi, Kato, Wibbels, Khormae's method of claim 11, with Mizubata's method of shifting of an image including digitally shifting the image in a direction aligned with or transverse to a medium advance axis.

The suggestion or motivation for doing so would have been to correct for the misalignment of the image.

With respect to claim 18, Ohsumi in view of Kato in further view of Wibbels and further view of Mazubata, disclose the method of claim 11, wherein said shifting said image includes digitally rotating the image (Mizubata, col. 7, lines 36-42).

Ohsumi, Kato, Wibbels and Mazubata are analogous art, because they are from the same field of endeavor, namely Image Forming Apparatuses.

At the time of the invention, it would have been obvious for one skilled in the art to combine Ohsumi, Kato, Wibbels, Khormae's method of claim 11, with Mizubata's method of rotation of an image including digitally shifting the image in a direction aligned with or transverse to a medium advance axis. The suggestion or motivation for doing so would have been to correct for the misalignment of the image.

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### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Conrow et al (USP 6,667,756 B2) teach a duplex printing compensation method to shift image or media.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS J. LETT whose telephone number is (571)272-7464. The examiner can normally be reached on 8-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas J. Lett/  
Examiner, Art Unit 2625

/David K Moore/  
Supervisory Patent Examiner, Art Unit 2625